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THE DELIBERATE DECISION MAKING PROCESS TOOLBOOK

A Research Paper

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The Directorate of Research

Air Command and Staff College

In Partial Fulfillment of the Graduation Requirements of ACSC

by

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Disclaimer

The views expressed in this academic research paper are those of the authors and do not reflect the official policy or position of the U.S. Government or the Department of Defense.

Preface

Our five member research group of Army officers was presented with the opportunity to improve a process we have been taught and had used throughout our military careers, the deliberate decision making process (DDMP). Our experiences at division level and below led us to the conclusion that computer automation of this process has been very limited. At best, tactical level staffs integrated computers as word processing machines to create slides containing each step of the DDMP. Staffs would then fill out each slide as they went through the process. At the other end of the spectrum, the DDMP products were handwritten notes and sketches. Experience of the staff and the amount of time, from receipt of the mission to execution, certainly impacted the level of detail and look of the products that come out of DDMP. Familiarity with the process obviously affected output, also. We wanted to automate DDMP so that inputs were automatically formatted into slides for briefing the commander, thus allowing the staff to focus on DDMP and not the briefing. Also, we wanted to insure that information developed during each portion of the DDMP were automatically forwarded to later steps and available for use, as appropriate. Overall, we wanted to get away from simple word processing to developing a database that allowed data manipulation for the course of action (COA) development and wargaming steps of this process.

Our efforts produced a ToolBook computer program that walks the planner through mission analysis, COA development, war gaming and concludes with a recommended COA. All pertinent information is formatted into briefings and can be tailored by the user based on his/her boss's desires and the purpose of the briefing. We included the ability to

create additional slides for use, as required. Output can be viewed on a computer monitor or larger screen or printed hard copy to allow transformation into Vu-Graphs. Although not initially within our intent, the ToolBook is also an excellent complimentary training aid for teaching DDMP. We have included *hypertext* that appears on the screen by clicking the mouse arrow on certain areas within the shown page. This provides detailed information about a given step within DDMP.

This ToolBook is the first of its kind. It is a *process* ToolBook; not a *content* ToolBook. Content ToolBooks are stand alone teaching aids. A process ToolBook takes an existing process and packages it such that the user can work his way through the process with computer automation and animation. In a process ToolBook, the user must be very familiar with the process presented by the computer program. The DDMP is a very structured process, often precluding progression to the next stage until command decisions are made. If the user is not familiar with the United States Army's Deliberate Decision Making Process, he/she will have difficulty with this ToolBook. This does not, however, limit this ToolBook's applicability for use by other services. Although DDMP is a unique process to the United States Army, the Joint community has adopted the basic framework and expanded the process to fit the distinctive nature of joint planning and joint warfighting.

Review of this ToolBook by the Command and General Staff College (CGSC) at Fort Leavenworth resulted in very favorable comments for its utility and future use. Their intention, as of this writing, is to integrate this ToolBook into next year's curriculum for students attending CGSC and the Combined Arms and Services Staff School, as well as teaching national guard and reserve units this process. Additionally, they intend to send

the ToolBook to field units for use and evaluation. Finally, this ToolBook will be demonstrated and made available to Battalion and Brigade command selectees during the pre-command course at The Infantry School, Ft. Benning, Georgia.

Needless to say, our research team has been a bit overwhelmed by the interest CGSC and others have shown in the ToolBook. We expect ample feedback as users identify ways to improve this product. Although we will not be in a position to further modify the ToolBook, since we have follow-on assignments, the Army Faculty lead by LTC Wolf at the Air Command and Staff College plans to keep this ToolBook as an ongoing research project.

Finally, we want to acknowledge those individuals that provided us the help, direction and motivation to develop a product that will assist tactical units with DDMP. LTC Wolf deserves the lion's share of our gratitude. He developed the concept for this ToolBook, reviewed our progress throughout the year and allowed us to run with the guidance. LTC Moore and LTC Lane at Fort Leavenworth, listened to what we were trying to accomplish and conducted the initial coordination for our briefings to the CGSC department heads and instructors. LTC Lane's interest and active support for this project allowed us to further expose the Fort Leavenworth schoolhouse to the ToolBook. His decision to make the ToolBook available through Fort Leavenworth's Local Area Network (LAN) and behind the scene efforts to expose key individuals such as COL Bushover, Director Academic Operations and Futures, to the possibilities of this ToolBook were key in generating and maintaining a high level of interest in this project. On our return trip to Fort Leavenworth, LTC Pankey provided invaluable assistance by coordinating briefings to CGSC students; to Fort Leavenworth instructors and to COL Kain, Director of the

Center for Army Tactics. COL Kain and COL Bushover's vision for future use of the ToolBook reinforced our belief that automation of DDMP was a worthwhile effort.

CONTENTS

PREFACE ii

CHAPTER 1 1

TOOLBOOK BACKGROUND 1

INTRODUCTION 1
OBJECTIVES 3
APPLICATION 3
RESEARCH METHODOLOGY 4

CHAPTER 2 6

TOOLBOOK OVERVIEW 6

DDMP.TBK MAJOR POINTS 6
RECOMMENDATIONS 10
CONCLUSIONS 12

BIBLIOGRAPHY 13

APPENDIX A
Letters in Response to DDMP.TBK Demonstrations A-2
APPENDIX B
ToolBook Flowchart B-2
APPENDIX C
User's Manual C-2
APPENDIX D
Demonstration I Comments D-1
APPENDIX E
Demonstration II Comments E-1
APPENDIX F
DELIBERATE DECISION-MAKING PROCESS TOOLBOOK SURVEY F-1
ATTACHMENT
Biographical Outlines G-1

Abstract

The purpose of this project was to create an automated tool for conducting the Army Deliberate Decision Making Process (DDMP). Currently, the Army only uses automation in the DDMP to provide word processing or slide making capabilities, but no tool exists to automate the decision making process itself. Using the Asymetrix ToolBook authoring software, this research group created a user-friendly, doctrinally correct Deliberate Decision Making Process ToolBook (DDMP.TBK) which has application in tactical units and in the schoolhouse.

The first step required extensive research into current and evolving Army decision making doctrine. This involved review of current doctrinal manuals, review of final drafts of future manuals, and interviews with doctrinal proponents at Fort Leavenworth, Kansas. The next step was to create a working ToolBook which was presented at the Command and General Staff College (CGSC) for their feedback. After incorporating their recommendations, members of the research group returned to CGSC for ToolBook beta testing and additional feedback from students and faculty. The final step was to incorporate changes and prepare a user's manual.

The DDMP.TBK is a unique, process oriented tool that automates the decision making process, enhances productivity, and allows planning staffs to focus on the process rather than on producing the briefings that follow. Because of its functionality and applicability, the CGSC will use this ToolBook in their curriculum, and the ToolBook will be sent to several tactical units for field use. This ToolBook also has great potential for future expansion to increase its versatility and functionality.

THE DELIBERATE DECISION MAKING PROCESS TOOLBOOK

Chapter 1

ToolBook Background

Introduction

The ability of the commander and his staff to assimilate and process information about their mission, the enemy, friendly capabilities, terrain, and the impact of time on operations directly influences the commander's capacity to formulate workable decisions about how he will accomplish his assigned mission. Further, his understanding of the situation allows him to quickly reassess changes and modify earlier decisions. Army officers are taught the Deliberate Decision Making Process (DDMP) that systematically takes the planner through mission analysis, course of action (COA) development and wargaming and culminates in a recommendation to the commander as to the "best" COA for implementation. Staffs constantly look for ways to speed this process up and to maintain a record of previous guidance and decisions and rationale for earlier staff recommendations. Typically, division level staffs and below either use graphical display programs such as *Power Point* and word processing programs to both maintain data and to later format this information for briefings to the commander. The experiences of this research team and feedback from the Command and General Staff College (CGSC) at Fort Leavenworth indicate that a standard computer program for conducting DDMP does not

exist. Based on this, the authors developed a computer program that walks the planner through DDMP.

The authors utilized the Asymetrix ToolBook program which is an object oriented development environment that provides open script programming language. The Asymetrix ToolBook has been used extensively at the Air Command and Staff College (ACSC) to provide information to students in lieu of textbooks and handouts. Students download ToolBooks from the ACSC Local Area Network (LAN) and then utilize them similar to an electronic textbook. Heretofore, ToolBooks have been primarily used to provide information. In several cases, ToolBooks have been developed that allow students to input data and then allow them to observe how those inputs affect outcomes. Examples include ToolBooks that require input of air packages to strike predetermined targets. The student is allowed to select targets and configure air packages. Results are then provided in terms of target destruction and aircraft destruction. In these cases, ToolBooks were used to provide limited simulation that then provided users the ability to test concepts in a very limited environment. The authors saw an opportunity to develop a multi-media ToolBook that walks the planner through the DDMP outlined in FM 101-5; forwards pertinent inputs for use in future steps within the process; allows data manipulation to create, wargame, and recommend a selected COA to the commander and formats briefings that can then be presented to the commander for decision and/or additional guidance, as required. Extensive use of flowcharts insured that appropriate portions of the DDMP were linked to each other. The end result is more than a textbook on computer but rather an interactive productivity enhancer that actually helps in decision making and staff processes.

The Deliberate Decision Making Process ToolBook (DDMP.TBK) is a stand alone product. However, this paper is submitted to discuss the following subject areas: objectives and scope of the DDMP.TBK project, research methodology, major points of the program, recommendations for future research and conclusions.

Objectives

The research team's overall goal was to create a computer application that assists the staff and commander with developing COAs for a any mission efficiently, effectively and quickly. The research team objectives for the DDMP.TBK project follow:

- To automate DDMP.
- To provide a user friendly computer program that walks the user through DDMP.
- To take user inputs and automatically format briefings for presentation to the commander.
- To forward pertinent data and analysis conducted during earlier portions of the DDMP to later steps, as appropriate.
- To speed-up DDMP, thus allowing quicker decision making by the staff and the commander.

Application

This ToolBook has application as a decision making tool in tactical field units, division and below, and as a training enhancer at military service schools. The DDMP.TBK also has applicability up to combatant command level in that it follows the prescribed doctrinal principles in joint planning publications. This project will benefit students at intermediate service schools by increasing their knowledge of DDMP through practical application of the process. For ACSC, it would be invaluable as a training aid during the Army DDMP instruction currently in the curriculum. COL Kain, Director, Center for Army Tactics and

COL Bushover, Director, Academic Operations and Futures, both at Fort Leavenworth, after viewing the ToolBook plan to incorporate the DDMP.TBK in the curriculum at CGSC, the Combined Arms Service Staff School (CAS3), and in Reserve and National Guard staff training programs (see Appendix A). Additionally, COL Kain has taken steps to forward this application to field units for testing and comments.

Research Methodology

Creation of the DDMP TBK required the research team to organize into programmers and doctrine researchers. Programmers initially spent the majority of their time becoming familiar with the Asymetrix ToolBook programming procedures and conventions. The doctrine group researched and re-familiarized themselves with the deliberate decision making process outlined in FM 101-5. Although this manual is currently in draft form, discussions with Fort Leavenworth doctrine writers insured current doctrine was used.

Second, the research group developed a flow chart of the DDMP shown at Appendix B to allow programmers to begin translation of the process into ToolBook format. The end result was a story board that linked inputs to outputs and to later portions of the DDMP. The team also decided how outputs would be formatted. A simple example of this linkage is illustrative of the process. During the first portion of the DDMP or mission analysis, planners develop the mission statement for approval by the commander. The ToolBook automatically updates briefing slides with the approved mission statement and also forwards a copy of the mission statement to the COA development portion of the ToolBook.

Critical to developing the DDMP.TBK was insuring user friendliness. The research team did not want to create a program that was too difficult for the typical user to master. Another concern was user familiarity with ToolBooks in general. Most Army officers have not been exposed to this type application. Therefore, the research team also developed a User's Manual (Appendix C) that describes system requirements as well as provides instructions and diagrams illustrating common conventions for the DDMP.TBK. The User's Manual is in addition to instructions built into the ToolBook program.

The research team tracked versions of the ToolBook to insure users could distinguish between older and updated ToolBooks. The first version was extensively reviewed for product improvements. This was followed by demonstration of the ToolBook to doctrine writers and curriculum instructors at Fort Leavenworth. Comments provided during this demonstration were then either integrated into the ToolBook or documented for later development during the next ACSC school year. Comments are at Appendix D.

A second demonstration was conducted at Fort Leavenworth. This also included practical use of the ToolBook by students conducting course work in an exercise called *Prairie Warrior*. This exercise is a Corps level scenario occurring in Korea. The research group does not expect formal written feedback from this group until May 95. However, initial comments from these users along with comments from instructors were documented for future use and are at Appendix E. Survey format for collecting user comments are at Appendix F.

The final actions by the research team involved packaging the ToolBook so that it fit on three 3.5 in floppy disks. Installation uses the Setup Program, allowing the new user to simply run *Setup* from the *Program Manager* in *Microsoft Windows*.

Chapter 2

ToolBook Overview

DDMP.TBK Major Points

The DDMP.TBK utilizes most of the capabilities found in a full featured multimedia ToolBook. Navigation within the ToolBook is simple and concise enough for the inexperienced user, but also flexible enough for the advanced user. A user can navigate through the ToolBook page-by-page and thus go through the decision making process step-by-step. The ToolBook also allows navigation from major section to major section. By using the full featured index, a user may navigate to any page within the ToolBook. First time users should go through this ToolBook page by page in order to get a full understanding and appreciation for all the unique capabilities of the program. Icon driven navigation and color coded pages and sections insure users know exactly where they are within the ToolBook. Navigation through the ToolBook is further enhanced by the use of both a *main table of contents* and *section tables of contents*. These features tailor the ToolBook to meet user needs.

The DDMP.TBK introduction section includes both 'help' and 'get more information' functions. The help function is activated by the *help* item on the menu bar at the top of each page. This feature is designed to help a user with ToolBook program functions. The help function addresses the following topics: about hypertext books, hotwords and other objects, using the menu bar, and using entry pages. The help function on using entry

pages provides assistance on DDMP.TBK peculiar page functions while the other three functions concern generic ToolBook applications. The *more info* buttons found on many of the pages in the ToolBook provide instructional information to help teach the decision making process as well as to teach the operation of the DDMP ToolBook program itself. As an example, activation of the *more info* button in the mission analysis section displays the eleven steps of the mission analysis process. Conversely, if the *drive on* button of a section's entry page is clicked, the user will bypass table of contents and instructional information and proceed directly to the first process step of the section. This allows experienced users to rapidly proceed through the ToolBook. Clicking the *next page* button from the beginning of the program to the end will progress a user through all pages (including all instructional pages) of the ToolBook, in order. As an additional help feature, a user may click on the *page title* to display doctrinal information for that particular activity or detailed instruction on use of the page's functions. This feature also includes advice on where to find more detailed or other doctrinal information for conducting that page's activity.

In addition to ToolBook's standard navigation buttons and menu bar items, unique DDMP ToolBook features include:

- fill-in, editable fields for organizing and presenting information,
- a *gather tools* page at the beginning of each section which automatically warns users of the absence of supporting information required to complete a section,
- customized printing capabilities,
- pop-up DDMP calculators, and
- automatic briefing slide generation.

For automatic briefing slide generation, the user enters the required information in the entry fields and then forwards this information to briefing slides via an *update slide* button. Most entry fields automatically become "scrolling fields" to handle text overflow. Additionally, the *update slide* button will reduce the briefing slide font size or create up to three slides to handle overflow text.

The DDMP.TBK actually consists of three separate ToolBooks. The first contains the deliberate decision making process which includes the following major sections: Introduction and Help, Mission Analysis, Develop Courses of Action, Analyze Courses of Action, Wargame, Compare Courses of Action, and the Briefing Slides. The other two ToolBooks contain the appropriate standard briefing slides which can be reordered, augmented, or removed to produce a user customized briefing. The standard briefings included are the Mission Analysis Briefing and Course of Action Decision Briefing formatted in accordance with FM 101-5. Two briefing ToolBooks were used to simplify programming, reduce hard disk space requirements, and increase portability of the briefing books.

The mission analysis section is structured to organize user input in editable text fields resulting in a proposed restated mission for the Commander's approval. The DDMP.TBK requests the required information in a logical sequence, and it builds and updates briefing slides for a mission analysis briefing as the user enters the information. (This methodology is common throughout the ToolBook. It is particularly effective because it allows the user to concentrate on the analysis and decision making process rather than on the process of creating briefing slides.) The mission analysis section includes the ability to produce multi-phased task organization charts and a user tailorable time analysis plan that can be used as

both a briefing chart and as a critical time organizer. The user has the ability to graphically portray a timeline of up to 84 hours on four separate pages, complete with simple mission graphics

Within the course of action (COA) development section, the user can update critical information that may have changed since the mission analysis briefing. This section includes a *calculator* to determine enemy and friendly relative force ratios. Also, the user can draw sketches and record a narrative description for three separate COAs. Once drawn, each COA is automatically available within other sections of the ToolBook and can be automatically saved to standard briefing slides.

The COA analysis section is divided into two sub-sections: wargaming, and COA comparison. After reviewing and updating previously entered data, the user selects one of three methods (belt, box, or avenue in depth) to wargame each COA against probable enemy COAs. The program provides the flexibility to choose between two wargame recording techniques (narrative or sketch note). The program also offers the ability to build and print an unlimited number of sequences for each COA wargame. The pop-up Force Ratio and Risk Assessment calculators are available through button clicks or hotkeys to speed the wargaming process. Another feature of the wargame section is the ability to build a decision support template (DST) that incorporates drag and drop decision support graphics for each COA. An important part of the wargame process is the construction of a COA synchronization matrix for each COA. User input critical events information is sorted in time sequence and provides the foundation for building each COA's synchronization matrix. The key outputs from this section (COA wargame sequences, critical events timeline, DSTs, and synchronization matrices) provide the

Commander with the doctrinal tools for envisioning the time phased employment of resources and the probable results of each COA.

To compare COAs and recommend a selection to the commander, the program provides two separate doctrinal decision making tools (the numerical and subjective decision matrices). The numerical decision matrix provides the user the ability to customize comparison criteria, to numerically rank each COA based on these criteria, and to adjust the criteria weighting. The matrix automatically calculates each COA's total score and forwards the completed matrix to a briefing slide. The subjective analysis matrix prompts the user to input the advantages and disadvantages of each COA in order to perform a subjective comparison. The subjective matrix can also be printed or saved to a briefing slide. One or both of these tools are essential for producing a supportable COA.

Recommendations

DDMP.TBK demonstrations to the CGSC staff and faculty and use by CGSC and ACSC students have generated many valid suggestions to expand the current capabilities of the ToolBook. The current ToolBook focuses on the operations officer's inputs. Information from other staff members is provided separately through written estimates or during staff briefings. The creation of ToolBooks for other staff sections such as intelligence, logistics, and personnel that can interface with the DDMP.TBK would improve staff integration and reduce the time required to input the large amounts of necessary information into one ToolBook.

The DDMP ToolBook output focuses on the products used for developing and selecting a COA and for producing the mission analysis and COA decision brief. The next

step in the DDMP is the creation of unit orders. Additional programming could add the capability for the ToolBook to create mission type orders such as warning orders, fragmentary orders, or portions of the operations order.

To insure compatibility with all computers running *Microsoft Windows*, the research team chose to use programs only available with the *Windows* package. For example, the ToolBook uses the *MS Windows PaintBrush* program for drawing COA sketches. Later programming could provide the option to integrate more powerful drawing programs to allow quicker and easier drawing of COA sketches. The integration of popular database programs could also provide the user a markedly increased ability to input and manipulate unit data. An interface with off-the-shelf digital mapping programs could allow users the ability to download maps of the area of operations and draw graphics directly onto them. Another exciting possibility for the DDMP ToolBook would be the development of a program to run an animated simulation of each COA. Inputs from each phase of the DDMP would automatically build the scenario for the simulation.

Currently the DDMP is a research project. As the ToolBook continues to be used at CGSC, CAS3, ACSC, and in field units; users will continue to identify ways to improve it. As doctrine changes the DDMP ToolBook will require revision to reflect doctrinal changes. ToolBook updates are now dependent upon it continuing as a research project at the Air Command and Staff College. If the U.S. Army chooses to adopt the DDMP.TBK for field use and as a teaching tool for the deliberate decision making process, an Army organization should be established as a proponent of the ToolBook.

Conclusions

The DDMP.TBK is the first of its kind, a process oriented ToolBook that systematically takes the user through the Army's Deliberate Decision Making Process. It is also the first computer application that automates the decision making process for the planner at division level and below. It enhances productivity by allowing the staff to focus on the process not the briefings that follow. It further maintains a record of the process that allows review of rationale for earlier decisions. This ToolBook is also a training aid that transitions the student from classroom instruction to practical application. Finally, this project supplements the groundwork for later development of computer applications to assist the warrior of the future.

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Appendix A

Letters in Response to DDMP.TBK Demonstrations

DEPARTMENT OF THE ARMY
U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
1 REYNOLDS AVENUE, BUILDING 111
FORT LEAVENWORTH, KANSAS 66027-1352

REPLY TO
ATTENTION OF

ATZL-SWT

10 April 1995

MEMORANDUM FOR LTC Wolf, 225 Chennault Circle, Maxwell AFB, AL 36112

SUBJECT: TOOLBOOK DDMP

1. I extend my congratulations to the students who are developing the Deliberate Decision Making Toolbook. It is an outstanding tool that is doctrinally correct and will significantly help CGSC students apply the DDMP.

2. The students and faculty that reviewed the DDMP Toolbook concur that it is an excellent tool and wish that it was available during our core tactics courses last fall. CGSC is preparing for our end of course exercise "Prairie Warrior," I will make Toolbook available to students that are going to serve on division staffs during the exercise. A few of these students already received a demonstration from your project officers and are anxious to put it into action.

3. When the next class (AY 95/96) begins, I plan to make this tool available to all CGSC students during our tactics courses. The classrooms in Bell Hall will have the appropriate computer systems so that all staff groups can run Toolbook.

4. Majors Franke and Bender told me that we will receive the latest version sometime early may. I intend to send a copy to the III Corps commander and DCSOPS.

5. I encourage you to continue upgrading Toolbook DDMP because clearly it is an important tool. This is the type of research project that will not only benefit CGSC students learn the DDMP, but has outstanding potential to help the commander and his staff in the field.

6. LTC Pankey is my POC so please let him know if we can provide any further assistance.

JOHN M. KAIN
Colonel, Armor
Director, Center for Army Tactics

DEPARTMENT OF THE ARMY
U.S. ARMY COMBINED ARMS COMMAND AND FORT LEAVENWORTH
FORT LEAVENWORTH, KANSAS 66027-5000

REPLY TO
ATTENTION OF

12 April 1995

Lieutenant Colonel Don H. Wolf
225 Chenault
Maxwell AFB, Al 36112-6426

Dear Colonel Wolf:

I want to take this opportunity to tell you how pleased we are at the Command and General Staff College about the Deliberate Decision Making Process Toolbook developed by your students.

I'm sure you're aware that we are trying to develop our own multimedia capability. The toolbook created by Majors' Schultz, Franke, and others is an excellent product that we hope to use as the standard for our own projects. Their project is used by several tactics instructors and was also by our students who participated in an exercise with the French Staff College. The Combined Arms Services Staff School (CAS3) will begin using it later this month. The product they developed has broad applicability not only in an academic environment but also in operational units. The skills employed to develop such an outstanding product- sound tactical expertise combined with the ability to leverage technology- are a shining example of those needed by the Force XXI Warrior.

Please pass on to your fine officers our thanks for including us in their efforts. I look forward to working with your students on future projects.

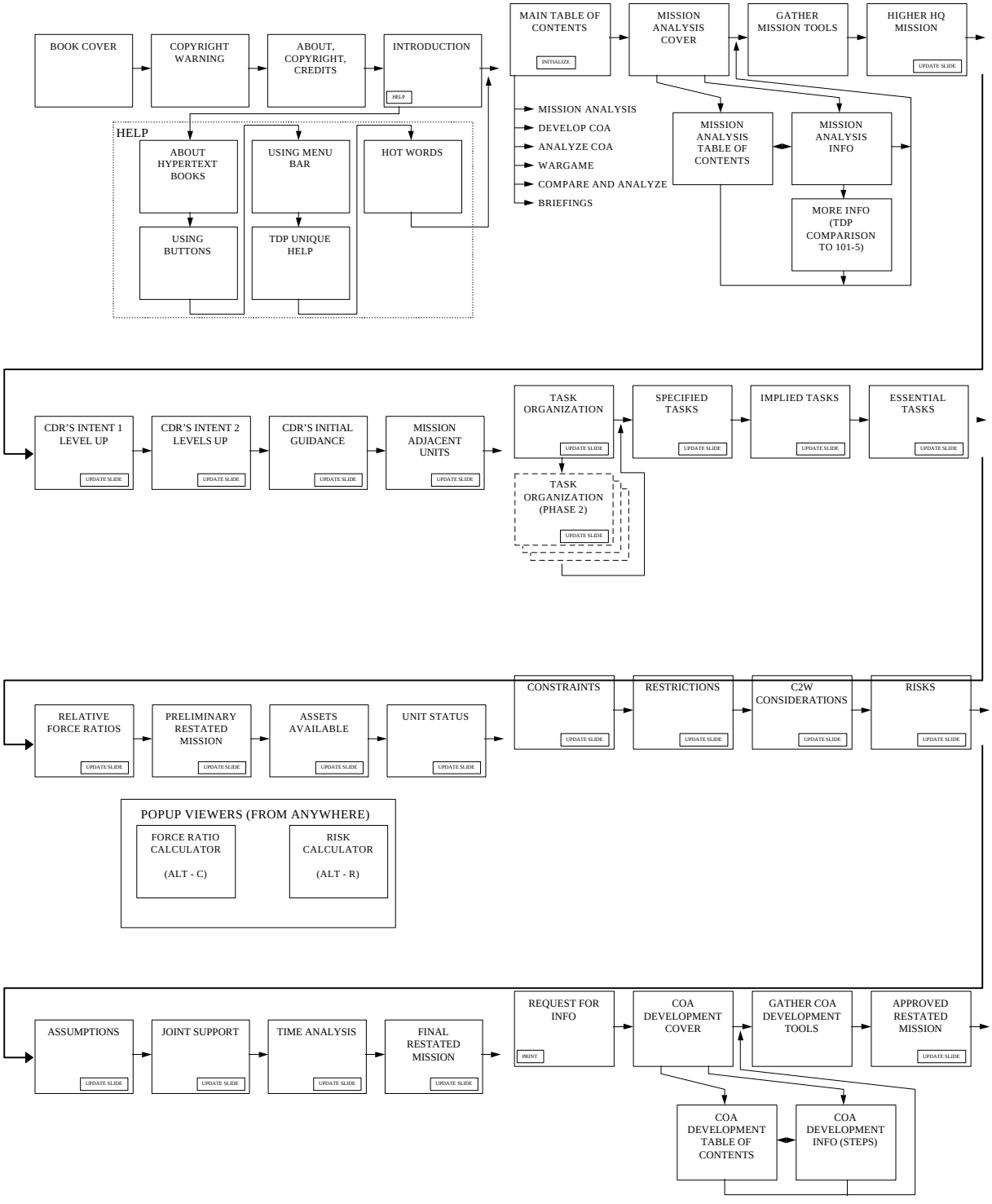
Sincerely,

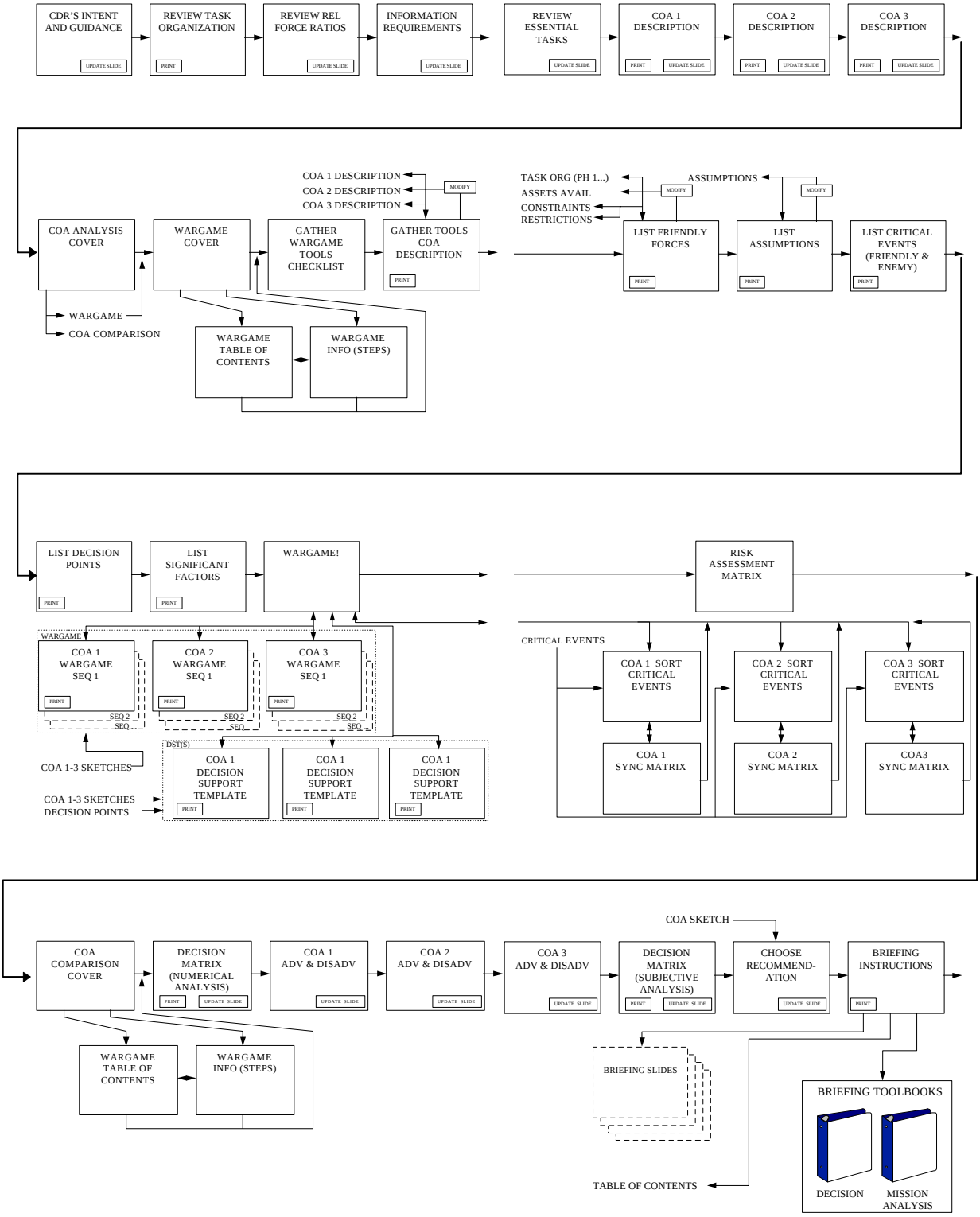
GARY E. BUSHOVER
Colonel, U.S. Army
Director Academic Operations
and Futures

Appendix B

ToolBook Flowchart

DELIBERATE DECISION MAKING PROCESS TOOLBOOK (DDMP.TBK) - FLOWCHART




CDR'S INTENT AND GUIDANCE
UPDATE SLIDE
REVIEW TASK ORGANIZATION
PRINT
REVIEW REL FORCE RATIOS
UPDATE SLIDE
INFORMATION REQUIREMENTS
UPDATE SLIDE
REVIEW ESSENTIAL TASKS
UPDATE SLIDE
COA 1 DESCRIPTION
PRINT
UPDATE SLIDE
COA 2 DESCRIPTION
PRINT
UPDATE SLIDE
COA 3 DESCRIPTION
PRINT
UPDATE SLIDE
COA 1 DESCRIPTION
COA 2 DESCRIPTION
COA 3 DESCRIPTION
MODIFY
COA ANALYSIS COVER
WARGAME COVER
GATHER WARGAME TOOLS CHECKLIST
GATHER TOOLS COA DESCRIPTION
PRINT
WARGAME
COA COMPARISON
WARGAME TABLE OF CONTENTS
WARGAME INFO (STEPS)
TASK ORG (PH 1...)
ASSETS AVAIL
CONSTRAINTS
RESTRICTIONS
MODIFY
ASSUMPTIONS
MODIFY
LIST FRIENDLY FORCES
PRINT
LIST ASSUMPTIONS
PRINT
LIST CRITICAL EVENTS (FRIENDLY & ENEMY)
PRINT
LIST DECISION POINTS
PRINT
LIST SIGNIFICANT FACTORS
PRINT
WARGAME!
WARGAME
COA 1 WARGAME SEQ 1
PRINT
SEQ 2
SEQ ...
COA 2 WARGAME SEQ 1
PRINT
SEQ 2
SEQ ...
COA 3 WARGAME SEQ 1
PRINT
SEQ 2
SEQ ...
COA 1-3 SKETCHES
DSTI(S)
COA 1 DECISION SUPPORT TEMPLATE
PRINT
COA 1 DECISION SUPPORT TEMPLATE
PRINT
COA 1 DECISION SUPPORT TEMPLATE
PRINT
COA 1-3 SKETCHES
DECISION POINTS
RISK ASSESSMENT MATRIX
CRITICAL EVENTS
COA 1 SORT CRITICAL EVENTS
COA 2 SORT CRITICAL EVENTS
COA 3 SORT CRITICAL EVENTS
COA 1 SYNC MATRIX
COA 2 SYNC MATRIX
COA3 SYNC MATRIX
COA SKETCH
COA COMPARISON COVER
DECISION MATRIX (NUMERICAL ANALYSIS)
PRINT
UPDATE SLIDE
COA 1 ADV & DISADV
UPDATE SLIDE
COA 2 ADV & DISADV
UPDATE SLIDE
COA 3 ADV & DISADV
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DECISION MATRIX (SUBJECTIVE ANALYSIS)
PRINT
UPDATE SLIDE
CHOOSE RECOMMEND-ATION
UPDATE SLIDE
BRIEFING INSTRUCTIONS
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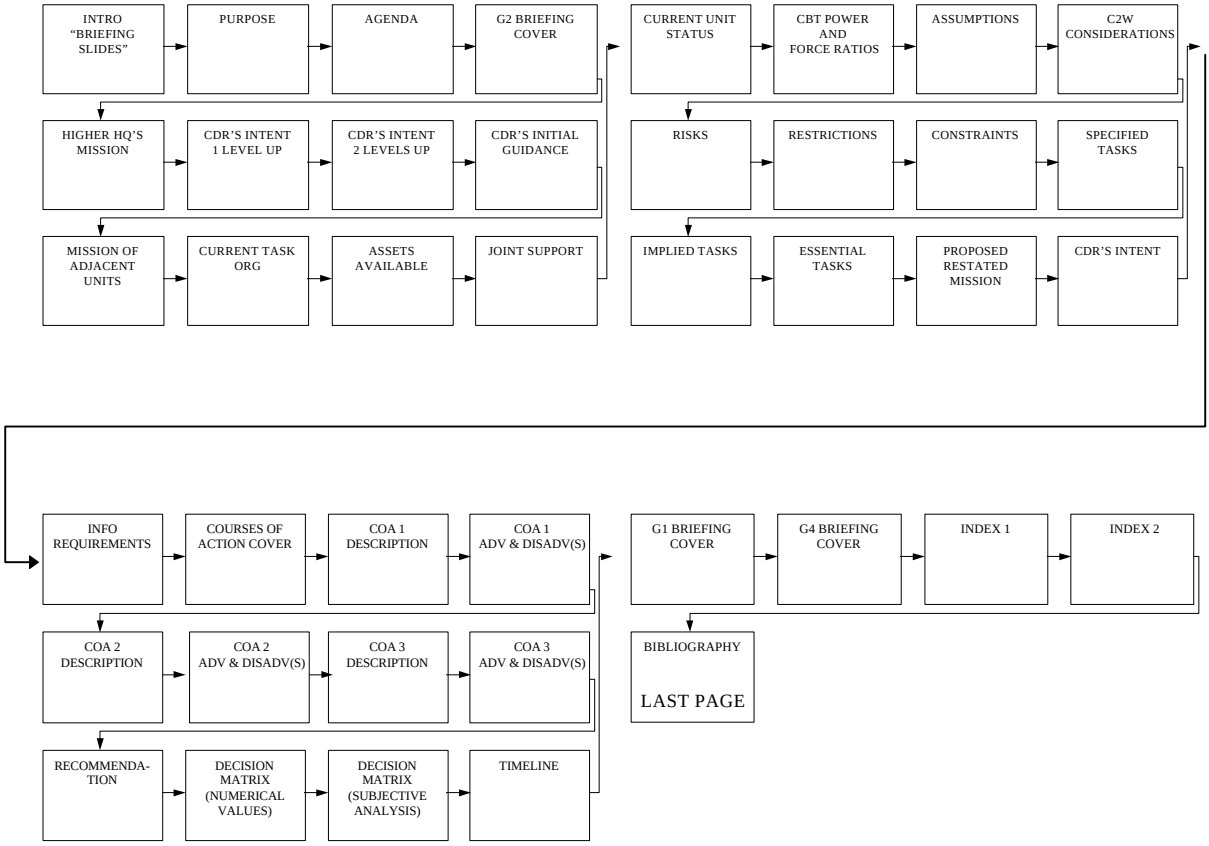
WARGAME INFO (STEPS)
BRIEFING SLIDES
BRIEFING TOOLBOOKS
DECISION
MISSION ANALYSIS
TABLE OF CONTENTS


INTRO "BRIEFING SLIDES"
PURPOSE
AGENDA
G2 BRIEFING COVER
CURRENT UNIT STATUS
CBT POWER AND FORCE RATIOS
ASSUMPTIONS
C2W CONSIDERATIONS
HIGHER HQ'S MISSION
CDR'S INTENT 1 LEVEL UP
CDR'S INTENT 2 LEVELS UP
CDR'S INITIAL GUIDANCE
RISKS
RESTRICTIONS
CONSTRAINTS
SPECIFIED TASKS
MISSION OF ADJACENT UNITS
CURRENT TASK ORG
ASSETS AVAILABLE
JOINT SUPPORT
IMPLIED TASKS
ESSENTIAL TASKS
PROPOSED RESTATED MISSION
CDR'S INTENT
INFO REQUIREMENTS
COURSES OF ACTION COVER
COA 1 DESCRIPTION
COA 1 ADV & DISADV(S)
G1 BRIEFING COVER
G4 BRIEFING COVER
INDEX 1
INDEX 2
COA 2 DESCRIPTION
COA 2 ADV & DISADV(S)
COA 3 DESCRIPTION
COA 3 ADV & DISADV(S)
BIBLIOGRAPHY
LAST PAGE
RECOMMENDA-TION
DECISION MATRIX (NUMERICAL VALUES)
DECISION MATRIX (SUBJECTIVE ANALYSIS)
TIMELINE

Appendix C

User's Manual

Appendix D

Demonstration I Comments

Comments from 16 Feb 95 Briefing.

1. Personnel briefed on 16 Feb 95.

   a. LTC Moore, Corps and Division Doctrine, DSN 552-4895

   b. LTC Lane, DAO, DSN 552-4478

   c. LTC Gammon, DAO, DSN 552-4992

   d. LTC Blaney, DLRO, DSN 552-2946

   e. MAJ Marrin, CDD, DSN 552-4895

2. Comments.

   a. The Tactical Decision Making Process has been renamed the Deliberate Decision Making Process.

   b. This product may have utility in courses taught in CGSC, i.e., the Battle Command Elective.

   b. DST is now renamed the Decision Support Matrix (DSM). The DSM is considered three times in the DDMP. Initially the Intel Officer develops a DST with the Enemy COAs, recommended NAIs, TAIs, an enemy timeline depicted on an overlay. This may be briefed as part of the Mission Analysis and is used during COA development. The DST is also used during Wargaming and based on the Wargame updated to identify Decision Points. friendly COA, etc.

   c. Risk assessment. Per the TBK the planner conducts risk assessment during Mission Analysis. This is tactical risk. He also considers operational risk analysis when considering assets available based on unit training, experience, equipment, etc. Once COAs are developed he considers operational risk based on the tasks to be accomplished. Finally units are assigned to each task/mission based, in part, on this risk analysis. The planner then considers ways to reduce risk.

d. Synchronization Matrix. All personnel agreed that at a minimum, a sync matrix format should be used and developed in some form of completion based on information entered into the TBK, i.e., enemy and friendly timeline running horizontally, critical tasks entered for the selected COA, DPs, etc. The TBK should print a sync matrix in landscape and in parts that can be taped together for display and readability.

e. Time Analysis. Add a scroll capability. Add capability to enter the friendly and enemy timelines.

f. Combat power window. Add ability to open and print multiple combat ratio windows based on the selected COA.

g. CCIR will include those PIR, EIR, FFIR determined to be critical.

h. Color contrasts. Change background colors on selected window, i.e., avoid red on green and black on green.

i. COAs. Develop capability to show forces (enemy and friendly) on COA sketches. Show units IAW upcoming graphics which are attached.

j. Use doctrinally correct colors for COA graphics.

k. Express DPs using doctrinally correct verbiage.

l. Express significant factors using doctrinally correct verbiage.

m. Add additional blocks for criteria to decision matrix, 10 minimum.

n. Delete “Broad Category Matrix”

o. Add ability to create additional slides and edit in slide mode.

p. Reference FM 101-5 Versus CGSC Text 101-5.

Appendix E

Demonstration II Comments

SUBJECT: Trip Report to Ft Leavenworth, 3-4 Apr 95

1. The Deliberate Decision-Making Process research project team sent two members (MAJ Franke and MAJ Bender) to Fort Leavenworth to conduct beta testing and demonstrate features of the ToolBook to personnel from the Command and General Staff College. This visit was arranged and coordinated during an earlier visit (16-17 Feb).

2. The beta testing scheduled for 3 Apr 95, was not conducted as planned due to CGSC problems in obtaining computer equipment for the CGSC students who were to do the testing. Instead, we demonstrated the ToolBook to several CTAC instructors and CGSC students.

a. Personnel receiving demonstrations on 3 Apr 95.
   (1) LTC Pankey, Chief, Division D of CDD, DSN 552-4970
   (2) LTC Kribbs, CDD Instructor (53d Mech Div Staff)
   (3) MAJ Hannon, CDD Instructor (22d AR Div Staff)
   (4) MAJ Dick, CGSC Student (22d AR Div Staff, ADCofS)
   (5) MAJ Gibbons, CGSC Student (53d Mech Div Staff, ADCofS)

b. Team members also provided the current version of TBK files to MAJ Jost. He is a CGSC student who is participating in a Combined, Joint Warfighter Exercise in France, along with 6 other personnel. The group plans to use the ToolBook during the exercise to conduct and teach Deliberate Decision-Making Process. The intent is also to leave copies of the ToolBook files with other participants in France.

c. The initial demonstrations took about two hours. Comments/feedback are at Encl 1.

3. On 4 Apr 95, a group demonstration was conducted for faculty members of CGSC (7 CTAC instructors) and 2 instructors from the Pre-Command Course (PCC). Attendees were generally interested and provided recommendations for changes and future additions. See Encl 2.

4. After the morning demonstrations, the team members visited CPT Flowers (CGSC Futures Division). CPT Flowers stated that the Futures Division was still interested in the ToolBook for use at CGSC. He also promised to get his boss (Colonel Bushover,

Director, Academic Operations and Futures) to send an “official” letter to ACSC expressing CGSC interest in the ToolBook.

5. Late afternoon, 4 Apr 95, a one-on-one demonstration of the ToolBook was given to COL Kain, Director, Center for Army Tactics (CTAC). COL Kain was very enthusiastic about the ToolBook, and he promised to send an “official” letter to ACSC outlining CGSC's intent to use the ToolBook in their curriculum. See Encl 3 for summary of COL Kain's comments.

3 Encl

RONALD E. FRANKE
MAJ, FA

ENCLOSURE 1 Initial Demonstration Comments to Trip Report to Ft Leavenworth, 3-4 Apr 95

1. Comments from instructors and students who received the initial ToolBook demonstration are shown below.

a. Would like to see TBK tie to completing/filling-in the OPORDER format.

b. All liked the “step-by-step” method of completing the Deliberate Decision-Making Process.

c. Liked ability to print working pages from Wargame pages. Recommended adding this capability to selected other pages.

d. Would like for RFIs entry page to be a hot-key pop-up or accessible from anywhere within the ToolBook.

e. Wanted the ability to change filenames of all ToolBooks in order to maintain multiple books.

2. “Bugs” noted during demonstration are shown below.

a. The Timeline Slide page gives a “Page Full” error after several iterations of entering timelines.

b. Briefing ToolBooks' custom import function does not work.

ENCLOSURE 2 Instructor Demonstration Comments to Trip Report to Ft Leavenworth, 3-4 Apr 95

1. Comments from instructors who received the second, group ToolBook demonstration are shown below.

a. Wanted ability to change filenames of all ToolBooks.
b. Wanted to be able to allow multiple users to work on separate ToolBooks and then import specific pages into a single consolidated book.
c. Wanted ToolBook to link to filling-in an OPORDER format.
d. Wanted a unit symbol palette from which users could drag unit symbols onto the COA sketches.
e. Would like specified, implied and essential tasks to tie into the sync matrix.

2. Several instructors indicated that overall the ToolBook was “on the right track.”

ENCLOSURE 3 Demonstration to COL Kain, Comments to Trip Report to Ft Leavenworth, 3-4 Apr 95

1. Summary of COL Kain's comments are shown below.

a. Felt that we had the ToolBook “just about right” and commented that it was “about time that someone made a tool to help the commander.”

b. Would like to see wargaming be more automated, along the lines of COAST (wargame simulation being developed at CGSC).

c. Stated that he wanted to use the ToolBook in the next year's curriculum.

d. Stated that he wanted the ToolBook to be used by the CGSC instruction team that conducts Combat Refresher Course (CRC) for the USAR.

e. He wants to send copies of final version of the ToolBook to:

- LTG Funk (Cdr, III Corps)
- LTG Buckholtz (at DCSOPS)

2. COL Kain promised to send “official” letter to ACSC addressing desires for future use of ToolBook at CGSC.

Appendix F

DELIBERATE DECISION-MAKING PROCESS TOOLBOOK SURVEY

BETA Tester Questionnaire

Date:_____

1. Did you find any "bugs" (features that did not function properly) in the ToolBook? _____

If so, briefly describe the "bug" and where you were in the ToolBook when the "bug" occurred.

_____
_____

2. Was the ToolBook "user friendly" and easily usable? ____

If so, describe features you thought were best and which helped make the ToolBook usable.
If not, describe features which made the ToolBook difficult to use.

_____
_____
_____

3. Was navigation (moving around in the ToolBook) intuitive and easy to do? ____

If not, how could it be improved?

_____
_____
_____

4. Was the ToolBook doctrinally correct in its approach to the Deliberate Decision-Making Process? _____

If not, briefly describe any doctrinal errors or omissions.

_____
_____
_____
_____

5. Do you think that this ToolBook is a useful product for performing the Deliberate Decision-Making Process? _____ Would you consider using this ToolBook in your next unit?_____

If not, why not?

_____
_____
_____

6. Do you have any additional comments or suggestions for improving this ToolBook?

_____

Please provide any additional comments.

Attachment G

Biographical Outlines

MAJOR DAVID J. BENDER is a 1980 graduate from the United States Military Academy at West Point, NY. He later received a Masters of Science in Applied Physics from Yale University. His most recent tour was as Chief, Engineer Branch of NATO's Allied Land Forces Southeastern Europe headquarters. MAJ Bender has held a variety of command and staff positions in the 24th Infantry Division (Mech) and 1st Armor Division. He has served on the West Point faculty as an Assistant Professor in the Department of Physics. He is also a licensed professional engineer. He is currently assigned as a student at the Air Command and Staff College with a follow-on assignment to the 92d Engineer Battalion at Fort Stewart, Georgia

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MAJOR EUGENE BUCKNER is a 1981 graduate from the United States Military Academy at West Point, NY where he received his Bachelor of Science with a concentration in Nuclear Physics. He received a Masters in Public Administration from the University of Auburn at Montgomery in 1995. In his most recent tour, he was the Chief of Flight Test at the Army Aviation Technical Test Center at Fort Rucker, Alabama. MAJ Buckner is a graduate of United States Navy Test Pilot School, Patuxent River, MD. MAJ Buckner has held a variety of command and staff positions including Commander, HHC, 11TH Aviation Brigade; Assistant Operations Officer, 11TH BDE; Flight Operations Officer, 25TH Aviation Company, Tank Platoon Leader, 5/32 AR BN, 24TH Infantry Division. He is currently assigned as a student at the Air Command and Staff College with a follow-on assignment to STRICOM in Orlando, FL.

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MAJOR KEVIN BURKE received his commission in the United States Army through the Reserve Officer Training Course in 1979. He received a B.A. in history and criminal justice from Norwich University in 1979. His most recent tour was as a company commander with the 160th Special Operations Aviation Regiment at Ft. Campbell Ky. Major Burke has held a variety of command and staff positions including three company commands as well as the primary staff positions of S-3, and S-4 at the Battalion level. He is currently assigned as a student at the Air Command and Staff College with a follow-on assignment at J-5, USSOCOM, Tampa, FL.

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MAJOR RONALD E. FRANKE received his commission in the United States Army through the Reserve Officer Training Corps in 1979. He received his Bachelor of Business Administration in accounting from Texas A&M University in 1979 and a Masters in Business Administration through Webster University in 1991. His most recent tour was at Fort Bragg, North Carolina where he served as Deputy G3 for Training of XVIII Airborne Corps Artillery and then as Battalion Executive Officer of 5th Battalion (Air Assault), 8th Field Artillery Regiment. MAJ Franke has served in a variety of command and staff positions including S2 for 2nd Battalion, 31st Field Artillery at Ft Campbell, KY; Commander of B Battery, 6th Battalion, 14th Field Artillery in Germany; and Chief of Nuclear Surety for 1st Armored Division. He is currently assigned as a student at the Air Command and Staff College with a follow-on assignment to US Army Cost and Economic Analysis in Washington, D.C.

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MAJOR JAMES V. SCHULTZ is a 1979 graduate of the United States Military Academy where he also received his Bachelor of Science Degree. He received a Masters in Public Administration from the University of Auburn at Montgomery in 1995. His most recent tour was at Fort Wainwright, AK where he served as Deputy G3 for Training for the 6th Infantry Division (Light). Major Schultz has served in a variety of command and staff positions including Operations Officer, 5-9 Inf, Logistics Officer, 2d Brigade, 6th ID (L), Operations Officer, 1-509 Inf (Abn) and as an Observer/Controller at the Joint Readiness Training Center. He is currently assigned as a student at the Air Command and Staff College and will remain at Maxwell Air Force Base to attend the School of Advanced Airpower Studies.

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